

ARTICLE APPEARED
ON PAGE K-3

THE BALTIMORE SUN
7 June 1981

Campus research and secrecy

By John Markoff

Renewed high levels of Pentagon funding for secret scientific research on American university campuses is producing a similar renewal of the old controversy over academic freedom and university priorities.

On the one hand, university scientists are stampeding the Pentagon to cash in on the bonanza in military research dollars. On the other hand, many scientists and other academicians, alarmed at the strings attached to the dollars, are fearful that legitimate, non-military scientific research is being sacrificed, along with academic freedom.

In a joint letter to the Reagan administration released in early April, the presidents of five of America's most important universities expressed "grave concern" at recent federal efforts to impose new restrictions on academic teaching and research.

The letter asked the State, Defense and Commerce departments to show that recent research funding guidelines issued by the Defense Department "are not intended to limit academic exchange arising from unclassified research and teaching." The authors expressed the fear that Pentagon oversight of the research may have a "chilling" effect on scientific research.

The letter was signed by the presidents of Stanford University, the California Institute of Technology, the Massachusetts Institute of Technology, the University of California and Cornell University.

Their concern stems from new guidelines—based on the 1972 International Traffic in Arms Regulations and the more recent Export Administration Regulations—that are intended to limit the transfer of technology to socialist countries.

The new Pentagon guidelines make it a federal crime even to discuss with a foreign scientist—without prior approval—any result that might improve the "state

of the art" of U.S. military technology without prior State Department approval.

University officials are concerned that the new rules' strictness may lead to an interpretation that U.S. scientists attending foreign academic meetings are in violation of the law for discussing their research with foreigners.

The controversy has focused on a key microelectronics research project, funded by the Pentagon, that is designed to create faster integrated circuitry for military use. Stanford University, Cornell, the University of Southern California and the Carnegie Mellon Institute are among the universities named as part of the industry-university "teams" designated to conduct the research.

The problem arises from the fact that a large percentage of the students in key graduate programs are foreign, making enforcement of the guidelines difficult.

At Stanford University, 20 percent of the graduate students enrolled in computer science and 25 percent of those in electrical engineering are foreign.

"The basic problem," says a Stanford spokesman, Bob Beyers, "is that anybody who gets a good degree and really studies in the right area—you can take all his papers away and everything else, and he's still got it in his head.

"And you can't lop that off—yet," he adds.

Another problem arises in determining what is strictly military research and what isn't. Under the new rules, the Pentagon has attempted to restrict research related to specific inventions that might lead to military weapons innovations, while allowing "basic" scientific research to continue freely.

Even Pentagon officials, however, acknowledge that there is a "gray area" between the two kinds of research. This is particularly true of microelectronics, which is an applied science.

The university presidents also point out that the application of export restrictions to universities would pose significant practical difficulties.

"It would be virtually impossible for most universities to administer such restrictions given the necessarily decentral-

ized and fluid nature of most campuses," they said in their letter.

"Universities are neither structured nor staffed to police the flow of legitimate visitors to a given laboratory or the dissemination of information by their faculty at international conferences."

Since the issuance of the original Pentagon memorandum, there have been several disputes that indicate the academic community may be heading for a confrontation with the Reagan administration.

For example, Cornell was told by the Department of Commerce earlier this year that a visiting scholar from an Eastern European country was to be excluded from a research laboratory where certain computer-related research was being conducted. Rather than accede to the order, Cornell decided not to invite the scholar. "We did not accept the scholar because we felt we couldn't live under the conditions that the Department of Commerce imposed on us. They were extremely restrictive. . . . Seminars and even conversations with colleagues were prohibited," said Dr. Don Cook, dean of research at Cornell.

At Stanford, an attempt by a Department of Defense agency to write into a contract language that would have given the agency "prior review" before the publication of research results ended in a compromise. The Pentagon will be able to see the findings before they are published, but will have no power to restrict publication.

Fears were also heightened earlier this year by the National Security Agency's attempt to restrict the dissemination of cryptography research results obtained by Dr. George Davida, of Georgia Tech.

The controversy over renewed calls for secrecy in military research is complicated by the dramatic shift in the source of federal research dollars.

Defense funding of campus research has increased sharply in the last few years, according to Pat Devaney, an official in the Office of the Dean of Research at Stanford.

"We had a decline around 1971 as a result of taking classified research off campus," she says. "Since that time, defense

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